MacDonald M, Homolar A, Rethel L, Schnurr S, Vessey R. (2015)

Manufacturing Dissent: the discursive formation of nuclear proliferation (2006-2012).

Discourse & Communication

DOI: 10.1177/1750481314568546

Journal submitted to: DISCOURSE & COMMUNICATION

Manufacturing Dissent: the discursive formation of nuclear proliferation (2006-2012)

Malcolm N. MacDonald, Alexandra Homolar, Lena Rethel, Stephanie Schnurr (University of Warwick) and Rachelle Vessey (University of Newcastle)

Centre for Applied Linguistics,

Social Sciences Building

University of Warwick,

Coventry,

CV7 2LA

Tel: +44(0)24-76-5-24250

m.n.macdonald@warwick.ac.uk

Size of paper: c. 9,500 words (with appendices)

Abstract

This paper draws on the conceptualisation of 'discursive formation' to examine the particular configuration of the ‘objects, subjects, concepts and strategies’ (Foucault, 1972) which constitute ‘nuclear proliferation’ between 2006 and 2012. While previous studies have mostly explored the discourse of nuclear proliferation through the analysis of newspaper texts, few have considered corpora from different sites or considered the changes, transformations and contradictions that take place when meanings are delocated from one site and relocated in another. Elements of poststructuralist discourse theory, critical linguistics and corpus linguistics are brought together to consider how events were constructed within two corpora: UNSC resolutions and newspaper articles published in prominent UK and US broadsheets. WordSmith Tools (Version 5) was used to analyse word frequencies, statistical patterns of keywords, word collocation profiles and concordance patterns. Results indicate that the most salient lexical items refer to actors, strategic actions and technologies. As these constituents of nuclear proliferation are delocated from the political sphere and relocated in the public sphere, three discursive strategies unfold: *personalisation*, *normalisation* or *exceptionalisation*, and *reification*.

Keywords: critical linguistics, corpus analysis, discourse, security, UNSC, international relations, resolutions, newspapers

1. Introduction

After a glimmer of optimism at the turn of the century, the 21st century is once again emerging as one of continuing crisis and conflict (Houtart, 2010). One way in which the sense of global crisis has intensified over the past decade is through the proliferation of nuclear weapons which the United Nations (UN), as well as the US and the UK media, maintain took place in Iran and North Korea over this period. In this paper, we examine the ways in which nuclear proliferation was discursively constituted between 2006 and 2012. Techniques of discourse analysis and corpus analysis are combined to compare resolutions passed by the UN Security Council (UNSC), and articles in prominent broadsheets from the US and the UK, two English speaking permanent members of the UNSC. Specifically, we will undertake three lines of enquiry into: a) the ways in which nuclear proliferation was discursively constituted in the international political sphere (2006-2012); b) the ways in which nuclear proliferation was discursively constituted in the public sphere in the UK and US (2006-2012); and, c) the 'contradictions', 'changes' and 'transformations' (after Foucault, 1972) that took place as the discourse of nuclear proliferation was delocated from the political sphere and relocated in the public sphere.

2. The discursive formation of nuclear proliferation

For some time now it has been proposed that any discrete body of knowledge is constructed not as a set of self-evident truths made manifest through the transparency of observable data, but rather is characterised by the particular set of objects, subjects, concepts and strategies which are constituted within a distinctive 'formation of discourse' (Foucault, 1972). One way of understanding the distinctiveness of a discursive formation is to analyse the ways in which words, statements and texts combine systematically to bring a particular view of the world into being: "to define a system of formation in its specific individuality is … to characterize a discourse or a group of statements by the regularity of its practice" (ibid: 74). Arguably, no area of knowledge or interhuman engagement is more contingent upon discursive practice than international relations. Here, sets of

intergovernmental legal, political and economic associations are created, maintained and transmitted across two realms: a political sphere located in national executives and intergovernmental organizations such as the UN, and a public sphere informed by a national press alongside electronic media such as television, the internet and social networking. It is a key principle of this paper that the distinctive features of a particular nexus of international events such as 'nuclear proliferation' is not constituted within any one particular set of texts, but in the dynamic relations that operate between different text types which circulate within and between different institutional sites, both national and international.

The analysis of the discourse of nuclear proliferation goes back to speeches and documents from the 'Cold War', the long running nuclear stand-off which took place between the USA and the USSR between 1947 and 1991. Using a heterogeneous approach, Mehan et al. (1980) concluded that the Cold War was constituted in the interstices between documents generated by the US administration, the National Council of Catholic Bishops, the Roman Catholic Church and the speeches of Ronald Reagan. This 'intertwined system of discourse' (158) had material consequences. For the USA and its allies the 'dialogic' process which took place between 'strategic analysts', 'the Catholic Church' and 'peace groups' (135) gave rise to three discursive 'strands' - the threat of Soviet expansion, reliance on nuclear weapons to curb the threat from the USSR, and the role of nuclear weapons – which ultimately served to deter global warfare over this period.

In studies addressing media texts more similar to our own, critical discourse analysis (CDA) has been used to consider the cross-cultural positioning of Iran within the discourse of nuclear crisis. Izadi and Saghaye-Biria's (2007) analysis of editorials relating to the Iran nuclear crisis in *The New York Times*, *The Washington Post*, and *The Wall Street Journal* from 1984 to 2004 revealed a range of lexis which presented Islam as a threat and Iran's government as untrustworthy, while failing to acknowledge the United States' refusal along with other signatories to realise their own commitment to the Nuclear Proliferation Treaty (NPT, 160-161). Using a similar analytical framework, Behnam

and Zenouz (2008) undertook a comparative analysis of articles relating to the Iran nuclear crisis from a corpus of Iranian and British broadsheets published in 2004: the conservative *Kayhan* and *Telegraph*, and the more progressive *Iran Daily* and *Guardian.* All four newspapers portrayed Iran as salient within the systemic-functional transitivity system, being realised either as an Actor, Senser or Sayer. However, papers on the left of the political spectrum in both countries gave particular prominence to verbal process types, acknowledging that the positions described are indeed ideological. One implication of this predominance of verbal processes in the Iranian papers is that Iran's nuclear policy appeared to be supported by a political consensus within the country. By contrast, right wing newspapers in both countries tended to describe events using material processes, which bestowed them with greater facticity. British newspapers presented a dichotomized worldview, where the EU and Iran occupied polarised positions, with Iran's uranium enrichment programme coming in for particular vilification (213-216).

Most recently, Rasti and Sahragard (2012) analysed the patterns of discourse in 23 articles on Iran's nuclear programme published in the *Economist* between 2007 and 2010. Once again they described a polarization at the lexical level between Iran and the West, where the western 'we' was portrayed positively as supporting sanctions while an Iranian 'they' was represented in a negative light, particularly with regard to 'confidence-building activities' in relation to arguments around the lifting of sanctions (735-736). This dichotomisation was further heightened through the use of a range of conceptual metaphors within the periodical (737-739). For the most part, the reactions of Iranian citizens were elided from the presentation of the arguments around sanctions and, where they did occur, were represented as edgy, unpredictable and self-interested (740). At the level of discourse, temporality was frequently invoked to legitimize a negative orientation towards Iran and its nuclear programme along with invocations to an 'indeterminate' group of international actors to position themselves. Additionally, a range of argumentation strategies were used to legitimate international action against Iran, including the topoi of 'usefulness/advantage', 'danger', 'justice' and 'responsibility' (743-744). Finally, a negative perspective on the Iranian nuclear issue was

generated by using nominalisation and passivisation to elide attribution of agency, as well as referring to many more Western than Iranian sources (745-6).

Discourse studies relating to nuclear proliferation in North Korea are less plentiful than those in relation to Iran. An early paper (Min, 1999) undertook a critical-linguistic, cross-cultural discourse analysis of 92 articles harvested from the *New York Times* and the *Korea Herald* relating to the first four months' coverage of the nuclear stand-off between North Korea and South Korea in 1994. While headlines (or 'macro propositions') in the *New York Times* accorded the US prominence in mediating the North Korean nuclear talks (8), headlines in the *Korea Herald* focused more locally on North Korean transparency for the security of the Korean peninsula and the freezing of North Korean nuclear activities. The *New York Times* positioned U.S. participants as the agents in the negotiating processes, while the agency of the Korean participants was downplayed through a variety of rhetorical devices (11-12). Unsurprisingly, the *Korea Herald* increasingly constructed the South Korean participants as principal agents in the US-North Korean nuclear talks, with the US being accorded agency in a less prominent fashion (14). This was realised in part through the respective thematisation of the U.S. in the *New York Times* headlines (13-14) and South Korea in the *Korea Herald* headlines (23-4). With regard to lexicalisation, in the *New York Times* there was a considerable degree of over-wording around the vocabulary related to the notion of crisis, with the use of associated words such as 'crackdown', 'breakthrough', 'curbs', and the word 'crisis' itself (10-11). By contrast, the *Korea Herald* did not exhibit such plentiful lexicalisation around the theme of crisis; in fact it attested to portraying events on the Korean peninsula as generally less unstable (19-21).

While the studies of the discourse of nuclear proliferation crisis in the Iran and Korea reviewed above have yielded some interesting insights into the ways in which lexis is used for ideological effect, they have all restricted themselves to analysing just one type of media text. Furthermore, the corpus size has necessarily been small due to their qualitative approach. While Mehan et al.'s

approach is perhaps closest to our own study in as much as they do consider the relations between different text types, their corpora remain relatively small and subject to manual analysis. By contrast, our study uses corpus analysis techniques to engage critically with the constitution of the nuclear proliferation across different text types, as a discursive formation (after Foucault, 1972). In particular we aim to problematize the ways in which the notion of 'crisis' is constituted as texts are delocated from the political sphere and relocated in the public sphere.

3. Methodology

The methodological approach we take in this paper combines elements of poststructuralist discourse theory (after Foucault, 1972), critical linguistics (after Kress and Hodge, 1979) and corpus linguistics (after Stubbs, 1996). While the individual methodological strands we draw on are well established in communication studies and applied linguistics, it is rare for the conceptualisation of discursive formation to be analysed using corpus techniques; and to the best of our knowledge only Baker and McEnery's (2005) analysis of articles about refugees and asylum seekers published in UK newspapers and the Office of the United Nations High Commissioner for Refugees (UNHCR) has attempted to look at the linguistic and discursive relations between texts across the political and the public spheres. Our study arises from a multidisciplinary research project carried out at the University of Warwick, UK that investigates the dynamics that shape the emergence, success and failure of crisis leadership in global economic and security governance (CLiGG, 2012).[1]

Our corpora were compiled from two different sites: the United Nations Security Council (UNSC); and prominent national press outlets in the UK and the US, commonly regarded as two of the most powerful permanent members of the UNSC. The UNSC resolutions corpus (Table 1) comprised all UNSC resolutions between 2006 and 2012 that were available online (http://www.un.org/en/sc/documents/ resolutions/). Between 2006 and 2012, there was a range of

[1] http://www2.warwick.ac.uk/research/priorities/globalgovernance/projects/global_crisis_leadership/

48-88 resolutions per year, with an annual average of 63 resolutions and an average length of 1558 words per resolution.

Table 1: UNSC resolutions corpus

	Words	Texts
2006	78,981	88
2007	75,074	57
2008	88,817	65
2009	87,650	48
2010	95,478	59
2011	114,085	66
2012	103,566	53
2013	7,041	4
TOTAL	**657,685 words**	**440 texts**

Four newspapers were selected for analysis: *The Times* and *The Guardian* from the UK; and *The New York Times* and *The Washington Post* from the US. Not only do these papers from each country represents a spread of political viewpoints, from the 'left' to the right' of the political spectrum, but they also are 'broadsheets' which are conventionally regarded as publishing more verifiable, 'serious-minded' content than - for example - UK tabloids. The US/UK broadsheets corpus (Table 2) comprised all articles containing the phrase 'nuclear crisis' or 'nuclear proliferation' between the years 2006 and 2012 from these four papers. The data was collected using the news database site Nexis UK. Between 2006 and 2012, the broadsheets produced 162 to 361 nuclear-related articles per year between them, with an average of 227 articles per year. The documents in the corpus were converted from their original, varied formats to a uniform text format amenable to machine analysis and the corpus was cleaned by inserting header, footer and body tags so that the considerable metadata could be filtered from any corpus analysis.

Table 2: US/UK broadsheets corpus

	Newspaper	Words	Texts
2006	*Guardian*	37,798	51
	New York Times	118,822	105
	Times	33,059	46
	Washington Post	74,008	72
Total		*263,687*	*274*
2007	*Guardian*	31,429	46
	New York Times	76,966	63
	Times	18,772	25
	Washington Post	59,567	49
Total		*186,734*	*183*
2008	*Guardian*	20,158	30
	New York Times	79,321	61
	Times	16,830	23
	Washington Post	63,750	63
Total		*180,059*	*177*
2009	*Guardian*	52,700	61
	New York Times	62,949	59
	Times	53,314	69
	Washington Post	54,249	52
Total		*223,212*	*241*
2010	*Guardian*	24,589	32
	New York Times	54,984	55
	Times	42,129	56
	Washington Post	43,308	49
Total		*165,010*	*192*
2011	*Guardian*	52,616	79
	New York Times	64,588	50
	Times	65,115	115
	Washington Post	104,438	117
Total		*289,757*	*361*
2012	*Guardian*	25,577	29
	New York Times	63,608	66
	Times	10,161	19
	Washington Post	53,505	48
Total		*152,851*	*162*
TOTAL		**1,461,310**	**1590**

Corpus analysis techniques were used to ascertain the content of the corpora and the comparability of one corpus with another. First, the word list programme in Wordsmith Tools (Version 5, Scott, 2008) was used to establish basic statistical information about each corpus and the overall frequencies of the lexis in each corpus. An analysis of lexical trends was then carried out using the keywords programme to establish which words were salient in each corpus, using the log-likelihood algorithm (hereafter LL) in order to determine whether words appeared more or less often than might be expected by their observed frequency in either of the two corpora rather than the reference corpus (after Scott, 2008). Words were identified as ‘key’, where their difference in

relative frequency was statistically significant when compared with the respective reference corpus ($p<0.000001$, after Baker, 2006). Since each corpus comprised a different genre and was also of considerable difference in size, it was not appropriate to compare them directly. Not least, this would have resulted in much of the statistically significant lexis revealing differences between the resolution and the newspaper genres, but not necessarily the ways in which the 'objects, subjects, concepts and strategies' relating to nuclear proliferation were themselves constituted. Since it was also not possible within the scope of the project to create a massive comparator corpus of all the articles from the four broadsheets published between 2006 and 2012, the broadsheets corpus was compared separately with the British National Corpus (BNC, 2007) as a common, baseline 'reference' corpus (RC).[2] However, it was possible to carry out the keyword analysis of the UNSC resolutions corpus with a greater level of precision by creating a sub-corpus of resolutions which specifically related to nuclear proliferation, as indicated by the document titles on the UNSC webpages. Between 2006 and 2012, there were 18 resolutions focusing on nuclear proliferation, ranging between 1 and 4 per year. This sub-corpus was then compared with the larger corpus which comprised all UNSC resolutions produced between 2006 and 2012.

Following Baker (2010), the top 100 keywords in each corpus (Appendix 1) were subjected to further qualitative checks and manual, context-sensitive interpretation (see also Baker and McEnery 2005; Baker 2006: 125). To do this, we used a combination of concordance and collocation data to reveal cross-corpus variations in linguistic phenomena identified previously in the sample. Firstly, senses and roles realised by the keywords were checked via concordance, whereby all the occurrences of a particular search term in a corpus are presented within its linguistic context (Baker, 2006: 71). Concordance data was sorted for qualitative analysis, in particular it was ordered

[2] The BNC is a monolingual, general corpus consisting of 100 million words of British English drawn from a range of different text-types produced towards the end of the 20th century. 90% of the corpus consists of written texts and 10% consists of spoken texts. Since the newspaper corpus included two US broadsheets, our analysis yielded a small number of keywords relating to stylistic differences in UK and US English, notably differences in orthography. However, while NEIGHBORS, TRAVELING, BEHAVIOR, FAVORED and HONOR occurred in the top 500 keywords in the newspaper corpus, only CENTER and PROGRAM occurred within the top 100 keywords. Of these, only PROGRAM was coded as a candidate for further analysis. In this case, it was regarded as an equivalent lexical item to PROGRAMME, which was the orthography preferred in UNSC resolutions.

alphabetically according to other salient words which occurred to the left and to the right of the keyword in question, in order to reveal regularities of co-occurrence within each corpus. Where it was necessary to understand the broader context of a term, concordance lines were expanded and longer sections of text were subjected to interpretative analysis. Secondly, data was examined relating to the collocation of keywords, that is to say their tendency to appear in combination or in the company of other words. Patterns of collocation occurring five words to the left and right of each keyword were considered, and the most frequently occurring collocates were then selected in order to consider the semantic implications of their co-occurrence with the keyword in question. Finally, the linguistic data was grouped together under emergent themes relating to the three lines of enquiry set out at the beginning of the paper. In the analysis that follows, keywords are set out in capital letters (e.g. 'IRAN') and collocates are set in italics (e.g. *said*).

4. A comparison of UNSC resolutions and US/UK broadsheets

A comparative analysis of the hundred strongest keywords in each corpus revealed that most salient lexical items fell into three categories signifying actors, strategic actions and technologies, which therefore emerged as the principal constituents of the discourse of 'nuclear proliferation'. The majority of these lexical items - around half the strongest keywords in the newspaper corpus, and around a third of those in the resolutions corpus – were constitutive of different actors, especially nation states and human agents. The following section reports on how these two prominent types of actor were constituted in the political and public spheres.

4.1. Actors

Twelve discrete nation states featured within the 100 strongest keywords within the newspaper corpus. Of these, the most prominent were IRAN, KOREA, UNITED, STATES, and CHINA. By contrast only seven discrete nations occurred within the strongest 100 keywords in the UNSC resolutions, with IRAN and DPRK - the Democratic People's Republic of Korea - appearing as the strongest. In the resolutions corpus, IRAN (n=340) collocates with *nuclear* (n=79), *programme*

(*n*=41), *activities* (*n*=26) – often co-occurring in regularly recurring phrases describing 'nuclear activities'. In particular, in the discourse of the UNSC resolutions, the noun 'Iran' is regularly embedded within lengthy noun phrases which are the butt of some measure of a censure against the country. For example, the idiosyncratic, technological phrase 'Iran's proliferation sensitive nuclear activities' recurs 8 times across 5 different resolutions, e.g.

> Calls upon all States to exercise vigilance regarding … individuals who are engaged in, directly associated with or providing support for Iran's proliferation sensitive nuclear activities or for the development of nuclear weapon delivery systems.

Furthermore, compared with other countries Iran is positioned within the resolutions as the butt of UNSC actions, especially as 'receiver' of verbal processes (after Halliday and Matthiessen, 2006) as evidenced by the recurring phrases such as 'persuade Iran…' (*n*=9), 'calls upon Iran…'(*n*=7), 'encourages Iran…'(*n*=6), and 'urges Iran…'(*n*=1). as well as the mental process 'review Iran's actions….'(*n*=4). Of the instances where Iran is actually accorded agency in the resolutions (*n*=86), it is regularly (*n*=78) subject to some form of coercion or negative evaluation for non-compliance or failure to carry out some prescribed action. For example in the concordance data extracted below (Fig. 1), the data is sorted to display instances where IRAN co-occurs with *not* two places to the right of the search term.

Figure 1 concordance data (UNSC resolutions): negative evaluation of Iranian actions

N	Concordance
139	Tehran Research Reactor, regrets that Iran has not responded constructively to
140	and related materiel; 9. Decides that Iran shall not undertake any activity
141	, in the event that the report shows that Iran has not complied with resolution
142	in paragraph 23 above shows that Iran has not complied with this resolution
143	and 14 November 2006 (GOV/2006/64), Iran has not established full and
144	report of 8 June 2006 (GOV/2006/38) Iran has not taken the steps required of
145	Atomic Energy Agency (IAEA), Iran has not established full and
146	and enrichment-related activities, Iran shall not begin construction on any
147	and S/2006/815 the export of which to Iran is not prohibited by subparagraphs
148	in paragraph 12 above shows that Iran has not complied with resolution
149	I to this resolution; 5. Decides that Iran shall not supply, sell or transfer
150	Atomic Energy Agency (IAEA), Iran has not established full and
151	Expresses its intention, in the event that Iran has not by that date complied with
152	(2006) 4 06-68142 7. Decides that Iran shall not export any of the items in
153	water-related facility; 7. Decides that Iran shall not acquire an interest in any
154	, in the event that the report shows that Iran has not complied with resolutions

While there were only two UNSC resolutions relating to North Korea between 2006 and 2012, *nuclear* again emerges as a collocate of the acronym 'DPRK' which was used to signify the state actor (Resolution 1718, *n*=7; Resolution 1874, *n*=7) However, rather than the phrase 'nuclear programme,' phrases most commonly used to describe DPRK's nuclear technology are 'nuclear-related' (*n*=4), 'ballistic missile-related' (*n*=4) and even (*n*=1) 'WMD-related', as exemplified in the phrases 'nuclear-related, ballistic missile-related and other weapons of mass destruction-related programmes'. Like Iran, the DPRK is positioned in the resolutions corpus as the receiver of the UNSC's verbal processes, e.g.:

> Calls upon the DPRK to join the Comprehensive Nuclear-Test-Ban Treaty (Resolution 1874);
>
> Deploring the DPRK's announcement of withdrawal from the NPT and its pursuit of nuclear weapons (Resolution 1874);
>
> Demands further that the DPRK return to the Treaty on the Non-Proliferation of Nuclear Weapons and International Atomic Energy Agency (IAEA) safeguards (Resolution 1718).

In our broadsheets corpus, *nuclear* is also a collocate of IRAN (*n*=670), which in turn co-occurs with *North* (*n*=244) and *Korea* (*n*=240). *Nuclear* appears in the phrases 'nuclear Iran' (*n*=53), 'nuclear-armed Iran' (*n*=25) and 'nuclear-weapons-capable Iran' (*n*=2), existential noun phrases which never appear in the UNSC discourse. In the newspaper articles Iran is more often associated with the phrase 'nuclear weapons' (*n*=126) rather than the phrase 'nuclear programme' which is exhibited in the UNSC discourse (*n*=39), as illustrated by Figure 2 below. Here, data is extracted from concordance data relating to the collocation of *nuclear* with IRAN, sorted three words to the right. It illustrates how the phrase 'nuclear weapons' preceded by the material processes 'develop', 'achieve', 'get', 'acquire' and 'build' is suggestive of a more immediate threat of attack.

Figure 2 concordance data (newspaper corpus): Iran associated with 'nuclear weapons'

N	Concordance
96	said supported the goal of preventing Iran from developing nuclear weapons.
97	stronger efforts by the West to prevent Iran from developing nuclear weapons.
98	, the renminbi, or on how to keep Iran from developing nuclear weapons.
99	that the United States will not allow Iran to achieve nuclear weapons
100	convinced that it must not allow Iran to get nuclear weapons and is
101	more important to us to make sure that Iran does not acquire nuclear weapons,
102	and it does need to see that nations like Iran do not acquire nuclear weapons or
103	for all people, including Iranians, if Iran does not build nuclear weapons.

What is more striking, however, is the association of Iran with North Korea that takes place in the discourse of the elite press. This stands in contrast to the UNSC discourse, which constructs each country as an individual case. Furthermore, we can extract from concordance data several examples where figurative language is used to achieve the 'otherization' of the collective adversary: hyperbole, which projects exaggerated and unsubstantiated future actions onto these two states in phrases such as 'the nuclear ambitions of North Korea and Iran…' and 'the more potent threats of North Korea and Iran …'; metaphor such as 'efforts to deny gangsters in North Korea and Iran …', 'caught in a quagmire in North Korea and Iran …', 'greater threats loomed in North Korea and Iran …', 'keys to the deadly puzzles of North Korea and Iran …', 'posturing being done by North Korea and Iran …'; and even a touch of bathos, as in 'small powers with small arsenals, i.e. North Korea and Iran.…'.

As well as nation states being constituted as prominent actors within the discourse of nuclear non-proliferation, named human agents are particularly salient within the broadsheets corpus, with the two US Presidents of the period being strong keywords (OBAMA, LL 16278.6; BUSH, LL 8589.93). Our analysis suggests that the transatlantic broadsheets position the political leaders of the principal nation states as protagonists in their accounts of nuclear proliferation. However, non-nominalised signification of human agents also occurred, e.g. the title PRESIDENT as well as a general category of governmental agents, OFFICIALS. Unsurprisingly, the names of the two American leaders were collocates of PRESIDENT. However, after *President* the next most frequently occurring collocate for both OBAMA and BUSH is the verbal process *said* (*n*=138, *n*=178, respectively) e.g.

> President Bush said Thursday that Iran has declared that it wants to be a nuclear power with a weapon to "destroy people," including others in the Middle East;
>
> Mr. Obama said he wanted a new United Nations sanctions resolution against Iran "that has bite".

This suggests that, in the newspaper discourse which circulates within the public sphere, leadership tends to be realised in terms of an agent who *speaks* rather than *does*; a leader is constituted as the one who speaks on the matter of the day. However, political leaders are not once mentioned within

the UNSC corpus. In contrast to the public sphere, prominent actors in the UNSC documents are collective, impersonal agents such as committees and different types of official. Of these, the IAEA (International Atomic Energy Agency, *n*=255), also referred to as AGENCY (*n*=246) are both in the top 100 keywords. In this respect, the IAEA is often referred to in the UNSC resolutions as the external authorizing body tasked with providing evidence of the compliance or non-compliance of a particular nuclear actor, e.g.:

> Reaffirms that Iran shall without further delay take the steps required by the IAEA Board of Governors in its resolution GOV/2006/14, which are essential to build confidence in the exclusively peaceful purpose of its nuclear programme and to resolve outstanding questions.

However, we also find within the 100 strongest keywords GOVERNORS and BOARD – as in the formulaic phrase 'Board of Governors' (above), as well as other keywords invoking agents of the 'doxa', e.g. COMMITTEE, COMPANY, PANEL, DIRECTOR and EXPERTS. While the anonymity of this lexis serves to evacuate these agents of any personal attributes, its technocratic and occasionally hierarchical nature simultaneously imbues them with a certain power and authority through their positioning within the UNSC bureaucracy.

4.2. Strategic actions

A second grouping of keywords signifies the form of strategic action typical of the different text types which make up each corpus. At first sight, there appears to be some similarity between the broadsheets and the UNSC resolutions, with the three strongest 'strategic' keywords being common to both corpora: PROGRAMME/PROGRAM, PROLIFERATION and NON-PROLIFERATION. Within the broadsheets, the salience of these last two words was driven in part by the fact that 'proliferation' was a search term to construct the corpus. However, there is one very marked difference inasmuch as CRISIS appears as a strong keyword within the broadsheets corpus, but does not occur at all within our sub-corpus of resolutions relating specifically to nuclear proliferation. Within this sub-corpus, collocates of PROGRAMME were once again *nuclear* (*n*=55)

and *missile* (*n*=15), as in the phrases 'nuclear programme' and 'missile programme'. However, intriguingly, *peaceful* also emerges as a collocate of PROGRAMME in the UNSC resolutions (*n*=15). This combination usually occurs in the UNSC resolutions with reference to Iran in the emphatic, formulaic phrase, 'which are essential to build confidence in the exclusively peaceful purpose of its nuclear programme' (*n*=4). Within the broadsheets corpus, collocates of PROGRAM again signified either its apocalyptic nature - with *nuclear* (*n*=586), *weapons* (*n*=132), *enrichment* (*n*=64), *uranium* (*n*=49), or its attribution – with *Iran's* (*n*=150), *Iran* (*n*=82), *North* (*n*=41) and *Korea's* (*n*=35). *Peaceful* also featured as a collocate of PROGRAM in the broadsheets, although its invocation is mitigated in 21 out of a total of 35 occurrences, in clauses such as such as in 'Iran contends that its nuclear program is for peaceful purposes…'.

While there is some blurring of the context of 'crisis' in the broadsheets corpus due to the simultaneous occurrence of the financial crisis and the Fukishima nuclear accident during the corpus period, collocates of CRISIS relevant to our enquiry include *nuclear* (*n*=626), *Iran (n*=72), *Iranian* (*n*=62), *global* (*n*=49), *North* (*n*=48), *Korea* (*n*=26) and *Korean* (*n*=25). This emerges from numerous direct attributions to specific actors, such as 'Iranian nuclear crisis', 'Iran's nuclear crisis', 'North Korean nuclear crisis'; however, the 'nuclear crisis' is also constructed as being 'global' in its scope: '…one more invasion might just do the job and solve the global crisis of nuclear proliferation at the same time...'

Two collocates of PROLIFERATION in both corpora were not only *nuclear* (resolutions, *n*=70; broadsheets *n*=1323), but also *treaty* (resolutions, *n*=22; broadsheets, *n*=150). However, another subtle alteration in meaning occurs between the resolutions and the newspapers in as much as the words 'nuclear' and 'proliferation' only once combine within the resolutions corpus in the more totalising phrase 'nuclear proliferation' - within a clause which militates against its existential presence: '…effective IAEA safeguards are essential to prevent nuclear proliferation…'. In the resolutions corpus we rather find the more nuanced phrases such as 'proliferation of nuclear,

chemical and biological weapons' and 'proliferation-sensitive nuclear activities' (particularly associated with Iran). By contrast, the blunter combination 'nuclear proliferation' occurs regularly within the newspaper corpus (*n*=1139). Even within the elite press, this phrase occurs as a collocate (*n*=132) of *terrorism*, e.g.: 'Terrorism and nuclear proliferation remain the predominant threats of our time…'. We suggest that this combination operates hyperbolically through yoking together two of the threats to national security in the popular imagination into a single phrase. The broadsheets also describe these threats as *global* – another collocate of PROLIFERATION (*n*=81) - in their scope, e.g. here in an emphatic critique of Russia's 2006 hosting of the G8:

> … global leadership brings with it a responsibility to grapple seriously with global problems, of which *nuclear proliferation* is among the most pressing…

Apart from these three words, the key lexis signifying strategic action differs across the two corpora. Within the resolutions corpus, other strong keywords which taken on their own would appear to be relatively non-specific in their meaning, operate as the heads of complex evaluative noun phrases when interpreted in the context of the genre. For example, ACTIVITIES regularly co-occurs with nominalised forms that attribute minutely specified forms of NPT (Non-Proliferation Treaty) infringements to the perpetrator, e.g. 'enrichment-related and reprocessing activities, including research and development', 'Iran's proliferation-sensitive nuclear activities or the development of nuclear weapon delivery systems' and 'enrichment-related, reprocessing or heavy water-related activities or to the development of nuclear weapon delivery systems'. PURPOSES also combines frequently with *peaceful* (*n*=23) and *nuclear* (*n*=11) in phrases such as '…Iran's nuclear programme is for exclusively peaceful purposes,…'. By contrast with these two generalised words, which achieve specificity through their extension and nominalisation, two other resolution keywords SAFEGUARDS and VIGILANCE refer to procedures which become reified through their association with institutional processes. For example, SAFEGUARDS refers to the *Comprehensive Safeguards Agreement*, a contract that non-nuclear-weapon states are required to sign with the IAEA under the NPT, that 'obliges states not to use nuclear material to make weapons

or other explosive devices'. VIGILANCE also combines regularly with the verb *exercise* (*n*=15) and *States* (*n*= 12) in phrases such as:

> '…calls upon all States to exercise vigilance and restraint over the supply, sale, transfer, provision, manufacture and use of all other arms and related materiel'.

By contrast, within the broadsheets corpus the theme of sanctions appears to be a recurrent topic, while not being at all salient in the UNSC corpus. SANCTIONS often relate to *Iran*, which appears as the most frequently occurring collocate (*n*= 175), and are regularly *economic* (*n*=73) in their nature. 'Sanctions' also appears in the company of a range of adversarial lexis, such as the preposition *against* (*n*=127) and the verb 'impose' (*impose*, *n*=36; *imposed*, *n*=33; *imposing*, *n*=16), as well as *tougher* (*n*=33), *pressure* (*n*=25), *tough* (*n*=18) and *threat* (*n*=13). However, part of the reason for the greater salience of SANCTIONS within the broadsheets corpus is that much of vocabulary surrounding it is speculative, such as the modal verb phrase in this clause, 'The security council could impose worldwide sanctions but such a proposal could be vetoed by Russia or China'. SECURITY also emerges as a strong keyword, often emerging as a concept that comes reified within the proper name of organisations, not least the 'United Nations Security Council, but also the U.S. 'National Security Council'. Where security is referenced existentially, it is either attributed to the collectivity of the writer and the reader of the newspaper by being pre-modified by *our* (*n*=96), e.g. 'It is, we are told, "rogue states" that now imperil our security'; or comes pre-modified by some indication of its scope. The most frequent collocate of this type is *global* (*n*=48) often invoked in the context of expressing severe concerns, here with reference to the UNSC itself: 'the structure created to maintain global security is failing'.

4.3. Technologies

The leitmotif of both corpora is a distinctive lexis which describes different forms of technology relating to nuclear weapons. Within the resolutions corpus, NUCLEAR emerged as one of the two strongest keywords - along with IRAN - to signify the type of activity and materiel which is under

contention. Due to its inclusion as a search term, NUCLEAR was also the strongest keyword within the broadsheets corpus. Some collocates of NUCLEAR were common to both corpora - in particular *Iran* (resolutions, *n*=78; broadsheets, *n*=1,066) often in clauses and phrases signifying it as a perpetrator of proliferation, as well as *weapons* (resolutions, *n*=58; broadsheets, *n*=1,363), *programme* (resolutions, *n*=55)/*program* (broadsheets, *n*=557) and *proliferation* (resolutions, *n*=32; broadsheets, *n*=1,187). While the combination 'nuclear weapons' occurs regularly within both corpora, *weapons* appears particularly within the resolutions in the complex nominal phrases which often typify more technical texts such as full references to the NPT ('Treaty on the Non-Proliferation of Nuclear Weapons') and repeated phrases such as 'proliferation of nuclear, chemical and biological weapons'. While *Iran* and *program(me)* co-occur in both corpora in a recurrent nominalisation of the actor's culpability, the contextualisation tends to vary across the two different text types, e.g.

> Emphasizing the importance of political and diplomatic efforts to find a negotiated solution guaranteeing that Iran's nuclear programme is exclusively for peaceful purposes…
>
> …weigh the risks of a failure to impede Iran's nuclear program sufficiently against the risks of a military strike.

The first excerpt above, from Resolution 1747, stresses fairly unambiguously that Iran still has the right to develop its nuclear programme for 'peaceful purposes'; however the second extract from a *Washington Post* editorial is fairly typical of the broadsheets in engaging in a sustained problematisation of the choice between diplomatic and military intervention, particularly by the USA.

The differences between the collocates of NUCLEAR across the two corpora also underline the much more measured tone of the resolutions. As we have seen, uniquely within the newspaper corpus, we find the word *crisis* registering as a frequently occurring collocate of NUCLEAR (*n*=626). While some of this attribution is related to the Fukishima nuclear accident, which also occurred during the time period within which our corpora were compiled, each of the individual theatres of nuclear problematisation in the transatlantic press is attributed: 'the Iran nuclear crisis'

(*n*=18), 'the Iranian nuclear crisis' (*n*=57) and 'the North Korean nuclear crisis' (*n*=19). However, other collocates include *weapons* (*n*=1,333), *proliferation* (*n*=1,187), *Iran* (*n*=1,066) and *power* (*n*=673). These words can occur in such blatant dramatisations of events as this extract from the *Washington Post* (2009):

> Ahmadinejad sat without obvious reaction as Obama chided Iran for its pursuit of nuclear weapons, saying its actions -- and similar efforts by North Korea -- "threaten to take us down this dangerous slope" that makes the world less secure.

By contrast, collocates of NUCLEAR within the resolutions corpus include more technical language, which also conveys a greater degree of positivity than we find in the broadsheets, *development* (resolutions, *n*=49), *activities* (resolutions, *n*=46), *peaceful* (resolutions, *n*=42) and *non-proliferation* (resolutions, *n*=34). This emerges quite markedly in expressions of intent such as:

> Our goal is to develop relations and cooperation with Iran, based on mutual respect and the establishment of international confidence in the exclusively peaceful nature of the nuclear programme of the Islamic Republic of Iran;

as well as in repeated phrases such as 'proliferation-sensitive nuclear activities' or 'the development of nuclear weapon delivery systems', which appear relatively value-neutral through their complexity of nominalisation.

Both corpora are distinguished by the range of lexis relating to the technology of nuclear proliferation. While 'nuclear' is used to typify the set of events which are unfolding, another set of lexical items signify the material which is involved in nuclear weapons proliferation. Common keywords relating to technology which are common to both corpora include ENERGY, MISSILE, WEAPONS, URANIUM, ENRICHMENT, as well as WEAPON. While the three most frequently occurring collocates of ENERGY, *atomic* (resolutions, *n*=15; broadsheets, *n*=357), *international* (resolutions, *n*=13; broadsheets, *n*=289) and *agency* (resolutions, *n*=11; broadsheets, *n*=309) combine in the nominal group 'International Atomic Energy Agency', it is notable that *peaceful* is also a collocate in both corpora (resolutions, *n*=16; broadsheets, *n*=47), e.g.

> Iran's right to develop research, production and use of nuclear energy for peaceful purposes in conformity with its NPT obligations (Resolution 1929).

> Under the nuclear non-proliferation treaty (NPT), to which Tehran is a signatory, Iran has the right to a peaceful nuclear energy programme,… (Borger, 2010).

Along with many other articles, the *Guardian* echoes the resolutions in upholding Iran's right as a signatory for the NPT to maintain a nuclear energy programme as long as it is 'peaceful'.[3]

While *mass* (resolutions, *n*=18; broadsheets, *n*=102) and *destruction* (resolutions, *n*=17; broadsheets, *n*=101) both collocate with WEAPONS, co-occurring in the phrase 'weapons of mass destruction', *chemical* (*n*=24) and *biological* (*n*=23) only collocate with WEAPONS in the resolutions corpus, as shown here in the repeated clause (*n*=5):

> Determining that proliferation of nuclear, chemical, and biological weapons, as well as their means of delivery, continues to constitute a threat to international peace and security.

However, *world* (*n*=64) only emerges as a collocate of WEAPONS in the newspaper corpus, which can also occasionally indulge in a note of optimism not found within the resolutions, recurring regularly in the phrase 'world free of nuclear weapons', here in an overgeneralised recontextualisation of Resolution 1887:

> President Obama hailed the unanimous passing of an "historic" UN Security Council resolution aimed at ridding the world of nuclear weapons.

5. Discussion: rules of formation

In the analysis above, we have uncovered some of the distinctive regularities and combinations of lexis by which nuclear proliferation is constituted through a dynamic network of texts which create, maintain and transmit meanings within and across the political and public spheres. Through our comparative keyword analysis, we have identified three principal categories in each corpus: actors, strategic actions and technologies. In many cases, our qualitative consideration of collocation and concordance data has suggested that these categories were constituted differently in

[3]A comparative concord analysis of the relative frequency of 'peaceful' across the broadsheets in our corpus would suggest that there is some variability in this debate. However, on a quantitative analysis, the more liberal UK paper the *Guardian* does not emerge as the newspaper which is necessarily most concerned to reposition this aspect of the UN discourse. Of 1608 occurrences in the broadsheet corpus, 'peaceful' occurs: 98 times in the *New York Times*, with the collocates *purposes* (n=26) and *nuclear* (n=43); 43 times in the *Guardian*, with the collocates *purposes* (n=9) and *nuclear* (n=3); 65 times in the *Washington Post* with the collocates *nuclear* (n=26) and *purposes* (n=9); and only 23 times in the *Times*, with only *nuclear* as a collocate (n=3).

the different types of text. We suggest that these contradictions, changes and transformations do not indicate a lack of coherence, but rather point to certain strategies which are operationalized as these categories are delocated from one site and relocated within another site. In this respect, our approach resembles that of Mehan et al., who describe their (1990) analysis of multiple texts relating to the Cold War as 'a constitutive approach to discourse' (158) which '…shows how the meaning of events is constructed in reciprocal interaction' (137). However, while Mehan et al. view this multi-voicedness as a form of 'polyphony' (Bakhtin, 1981, Mehan et al., 1990), we rather describe the 'rules of formation' of nuclear proliferation discourse in terms of 'the conditions to which the elements of this discourse (objects, mode of statement, concepts, thematic choices) are subjected' (Foucault, 1972: 38).

As nuclear proliferation discourse is delocated from the political sphere and relocated in the public sphere, the roles of individual actors become more prominent. In particular, the names of more nation states and their leaders feature more prominently in the broadsheets than in the resolutions. We suggest that this realises the first discursive strategy, that of *personalisation*. In part, it reflects the contextual positioning of the two sets of documents under scrutiny. The resolutions are generated by the UNSC members – not least the five permanent members, China, France, Russia, the UK and USA - and speak to those in infringement of the NPT. By contrast, the broadsheets analysed describe relations between the most powerful players on the UNSC and the alleged perpetrators of the proliferation of nuclear weapons, Iran and North Korea. The difference in the occurrence of proper names reflects this relationship – the presence of the five permanent UNSC members is presupposed and therefore remains implicit within the resolutions, whereas China, France, Russia, the UK and USA remain actors who are external to the broadsheets and therefore require explicit mention. We have also seen that the resolutions exercise an overwhelming rhetorical force, and invoke the military and economic authority of the five most powerful nations in the world against the two principal NPT infringers, Iran and the DPRK, who are both positioned as the receivers of verbal processes and recipients of repeated censure for their acts of non-

compliance with UNSC statements. Since even newspapers which report on political matters aim to entertain as well as to inform (Östgaard 1965), one outcome is to describe a state of affairs in a way which is amenable for popular consumption. An effect of this is to highlight the role of national leaders, and constitute them as protagonists in relation to the unfolding of events. This is realised not so much through 'material' or 'behavioural' processes (after Halliday and Matthiesen, 2006) but rather through 'verbal' processes, and in particular the verbal process 'say'. More than anything else, a national leader is constructed in the national press as the one who speaks on the topic of the day, here nuclear proliferation. This contrasts with the elision of the names of national leaders within UNSC resolutions. The particular prominence given to the role of the IAEA also accords with insights afforded by the elite interviews from the wider CliGG database, in which the IAEA was often attributed with more authority than the UNSC itself.

Secondly, in relation to the realisation of strategic actions across the different text types, there appears to be a dramatisation of events for consumption in the public sphere which is not supported by the starker lexis deployed in the political sphere. The introduction of the word 'crisis' to describe the 'nuclear contention' (Rasti and Sahragard, 2012) within the broadsheets is the most striking finding in this regard. The series of elite interviews that we undertook under the wider remit of the CliGG project also intimated that neither professional nor elected officials working in the political sphere believed that nuclear proliferation was regarded as a 'crisis' in the political sphere. However, the broadsheets used the term, not just in relation to specifically regional events that unfolded over this period in Iran and on the Korean peninsula, but also in relation to global events. In this respect, not only was nuclear proliferation constructed in the public sphere as having a 'global' significance; but it was also linked within the newspapers to other 'exceptional' phenomena such as 'terrorism' and 'climate change'. In this respect, elite newspapers on both sides of the Atlantic appear to subscribe readily to the doctrine of *exceptionalism* (Agamben, 2005). However on our reading, the discursive strategy of the resolution is very much the opposite, framing nuclear proliferation in *normalising*, technocratic language. Yet it is impossible not to be sceptical about this sanitised

version of nuclear proliferation, invested as it is with both the military and rhetorical power of the five permanent members of the Security Council.

Third, descriptions of nuclear weapons technologies also appear to become *reified* as they move from the political sphere to the public sphere. Within the resolutions, actions relating to nuclear weapons technologies are nominalised in highly specific, complex phrases. By contrast, within the public sphere the lexis of these phrases tends to become foreshortened and condensed, often to the phrase 'nuclear proliferation' - a singular, coagulated concept into which a more variegated panoply of lexis is collapsed, such as the 'development', 'activities' and 'programmes' which are carried out by Iran and North Korea. While this reified term detracts from the precision of the central concept of this discursive formation, its concision and repetition renders it easier to grasp as a focus of aggression and antipathy on the part of citizens and decision makers alike.

In conclusion, the findings of this paper appear to support our initial thesis that a convergence of international events such as nuclear proliferation is not a static phenomenon which is constituted within any one particular set of texts. In this respect, the exploration of corpora drawn exclusively from a national press (e.g. Behnam and Zenouz, 2008; Izadi and Saghaye-Biria, 2007; Jiang, 2007; Min, 1999; Rasti and Sahragard, 2012) - while useful and insightful at a particular stage in the development of critical discourse studies - can only give a partial account of how a particular set of events is constituted in the dynamic relations that operate within and between different text types. By contrast, our exploration of nuclear proliferation has identified three discursive strategies which are deployed as meanings circulate from one site to another: in relation to actors, *personalisation*; in relation to strategic actions, *normalisation* versus *exceptionalisation*; and in relation to technologies, *reification*. These strategies are signalled by the changes, transformations and contradictions in the lexis which realise the 'elements' of nuclear proliferation as it is constituted within a discursive formation which is dynamic, complex and multi-faceted.

Acknowledgements

We would like to thank members of the Global Research Priorities (Global Governance) and the Professional and Academic Discourse research groups at Warwick University for their advice and encouragement. We would also like to thank Paul Baker for the judicious editorial care which he brought to this paper. The research was supported by a University of Warwick Strategic Award (RDF1063).

Bionotes

Malcolm N. MacDonald is Associate Professor in Applied Linguistics, University of Warwick, England. His main research interests lie in institutional discourse, with a particular interest in security discourse and medical discourse.

Alexandra Homolar is Associate Professor of International Security in the Department of Politics and International Studies. Her research focuses on the political economy of security, international security governance, and US defence and security policy.

Lena Rethel is Associate Professor in International Political Economy at the University of Warwick. She works on global financial governance and financial development in Southeast Asia. Her book *The Problem with Banks* (co-authored with Timothy J. Sinclair) was published by Zed Books in 2012.

Stephanie Schnurr is Associate Professor in Applied Linguistics at the University of Warwick.. Stephanie is also the author of *Leadership Discourse at Work. Interactions of Humour, Gender and Workplace Culture* (Palgrave Macmillan 2009) and *Exploring Professional Communication. Language in Action* (Routledge 2012).

Rachelle Vessey is Lecturer in Applied Linguistics in the School of Education, Communication, and Language Sciences at Newcastle University. Her PhD explored language ideologies and nationalism in Canadian newspapers using cross-linguistic corpus-assisted discourse studies.

References

Agamben, G. (2005) *State of Exception*. Chicago: University of Chicago Press.

Baker, P. (2006) *Using Corpora in Discourse Analysis*. London: Continuum.

Baker, P. and T. McEnery (2005) 'A corpus-based approach to discourses of refugees and asylum seekers in UN and newspaper texts', *Journal of Language and Politics* 4: 197–226.

Bakhtin, M. (1981) *The Dialogic Imagination. Four Essays*. Austin: University of Texas Press.

Behnam, B. and R. M. Zenouz (2008) 'A contrastive critical analysis of Iranian and British newspaper reports on the Iran nuclear power program'. In: Nørgaard N (ed.) *Systemic Functional Linguistics in Use*. Odense: University of Southern Denmark, Odense Working Papers in Language and Communication, vol. 29, pp. 199–218.

Borger, J. (2012). *Much rests on Iran's mood as UN nuclear team starts tricky task, The Guardian*, 21 February, p. 21.

British National Corpus, version 3 (BNC XML Edition) (2007) Distributed by Oxford University Computing Services on behalf of the BNC Consortium. URL: http://www.natcorp.ox.ac.uk/

Foucault, M. (1972) *The Archaeology of Knowledge*. London: Tavistock.

Halliday, M. A. K. and C. M. I. M. Matthiessen (2006) *Construing Experience through Meaning: A Language-Based Approach to Cognition*. London: Continuum.

Houtart, F. (2010) 'The Multiple Crisis and Beyond', *Globalizations* 7: 9-15.

Izadi, F. and H. Saghaye-Biria (2007) 'Discourse analysis of elite American newspaper editorials: The case of Iran's nuclear program', *Journal of Communication Inquiry* 31: 140–165.

Kress, G and R. Hodge (1979). *Language and Ideology*. Routledge.

Mehan, H., C. E. Nathanson and J. M. Skelly (1990) 'Nuclear Discourse in the 1980s: The Unravelling Conventions of the Cold War', *Discourse and Society* 1: 133 – 165.

Min, S. J. (1999) ‘Strategies of constructing meaning: A critical discourse analysis of news on the North Korean nuclear threat’. I.T.L. *Institut voor Togepaste Linguistik* 123-24: 1-35.

Östgaard, E. (1965). ‘Factors Influencing the Flow of News’. *Journal of Peace Research* 2: 39-63.

Rasti, A. and R. Sahragard (2012) ‘Actor analysis and action delegitimation of the participants involved in Iran's nuclear power contention: A case study of The Economist’, *Discourse and Society* 23: 729- 48.

Scott, M. (2008) *Wordsmith Tools Version 5*. Liverpool: Lexical Analysis Software Ltd.

Stubbs, M. (1996) Text and Corpus Analysis: Computer-Assisted Studies of Language and Culture. Oxford: Blackwell.

United Nations Security Council (2006) *Non-proliferation/Democratic People's Republic of Korea,* Resolution S/RES/1718 (14 October 2006), available from http://www.un.org/en/sc/ documents/resolutions/2006.shtml.

United Nations Security Council (2009). *Non-proliferation/Democratic People's Republic of Korea*. Resolution S/RES/1874 (12 June 2009), available from http://www.un.org/en/sc/documents/ resolutions/2009.shtml.

United Nations Security Council (2010). *Non-proliferation*. Resolution S/RES/1929 (9 June 2010), available from http://www.un.org/en/sc/documents/resolutions/2010.shtml.

Appendix

Table 3 Broadsheets corpus: 100 strongest keywords

N	Key word	Freq.	%	RC. Freq.	RC. %	Keyness
1	NUCLEAR	9976	0.74	8112		61542.99
2	IRAN	4045	0.30	1776		27824.27
3	OBAMA	1887	0.14	1		16278.60
4	WEAPONS	2164	0.16	3951		10846.86
5	PROLIFERATION	1556	0.12	739		10572.44
6	KOREA	1764	0.13	1799		10342.52
7	IRAN'S	1237	0.09	218		9458.46
8	BUSH	1744	0.13	3367		8589.93
9	STATES	2850	0.21	17873	0.02	8495.79
10	UNITED	2893	0.22	19030	0.02	8391.06
11	URANIUM	1115	0.08	526		7583.63
12	PRESIDENT	2499	0.19	15747	0.02	7428.74
13	CHINA	1708	0.13	4912		7321.85
14	IRANIAN	1095	0.08	929		6688.20
15	NORTH	2571	0.19	21221	0.02	6477.83
16	MR	4166	0.31	66114	0.07	6131.72
17	IRAQ	1244	0.09	2675		5915.97
18	OFFICIALS	1565	0.12	6116		5912.27
19	SECURITY	2019	0.15	13713	0.01	5746.07
20	SANCTIONS	1027	0.08	1283		5728.78
21	SAID	7291	0.54	195580	0.20	5405.73
22	WASHINGTON	1184	0.09	3120		5244.10
23	RUSSIA	1215	0.09	3726		5079.75
24	AMERICAN	1946	0.14	16100	0.02	4894.78
25	ADMINISTRATION	1389	0.10	6408		4859.58
26	FUKUSHIMA	558	0.04	2		4791.72
27	MILITARY	1612	0.12	11287	0.01	4504.80
28	GLOBAL	1051	0.08	3527		4237.25
29	PROGRAM	1077	0.08	4029		4147.11
30	CRISIS	1197	0.09	5862		4067.09
31	REACTOR	699	0.05	781		4009.57
32	TEHRAN	576	0.04	266		3930.38
33	ENRICHMENT	566	0.04	245		3900.17
34	JAPAN	1130	0.08	5579		3823.90
35	AFGHANISTAN	630	0.05	613		3733.46
36	REACTORS	604	0.04	503		3703.52
37	INTERNATIONAL	1878	0.14	22026	0.02	3649.57
38	DEFENSE	517	0.04	203		3613.13
39	ATOMIC	691	0.05	1096		3611.39
40	OBAMA'S	396	0.03	0		3419.32
41	ISRAEL	841	0.06	2794		3404.54
42	NATIONS	942	0.07	4115		3382.06
43	ITS	5389	0.40	160579	0.16	3308.45
44	FUEL	908	0.07	4190		3176.08
45	INTELLIGENCE	833	0.06	3421		3077.14
46	PAKISTAN	667	0.05	1577		3070.80
47	KOREAN	618	0.05	1193		3043.52
48	ENERGY	1275	0.09	12098	0.01	2916.98
49	TSUNAMI	386	0.03	84		2893.94

50	WAR	1833	0.14	27222	0.03	2881.52
51	FOREIGN	1410	0.10	16065	0.02	2805.42
52	PERCENT	725	0.05	2926		2699.36
53	JAPAN'S	532	0.04	958		2677.34
54	POWER	1862	0.14	31627	0.03	2548.77
55	AGENCY	868	0.06	5645		2533.20
56	TERRORISM	469	0.03	690		2503.89
57	AHMADINEJAD	286	0.02	0		2469.49
58	PLANT	967	0.07	8002		2431.42
59	CLINTON	566	0.04	1676		2398.75
60	BOMB	670	0.05	2948		2397.24
61	RADIATION	546	0.04	1712		2262.49
62	KOREA'S	315	0.02	118		2215.81
63	PUTIN	254	0.02	0		2193.18
64	KHAN	423	0.03	692		2190.87
65	HAS	6507	0.48	252703	0.25	2174.27
66	MCCAIN	265	0.02	22		2133.47
67	TOKYO	456	0.03	1031		2131.93
68	MISSILE	432	0.03	865		2102.75
69	TEPCO	245	0.02	2		2092.27
70	EARTHQUAKE	373	0.03	478		2066.80
71	CHINESE	671	0.05	4153		2014.23
72	CHINA'S	376	0.03	564		1996.50
73	COUNTRIES	1174	0.09	16575	0.02	1936.98
74	WORLD	2217	0.16	53806	0.05	1923.77
75	PAKISTANI	334	0.02	380		1907.31
76	THREAT	717	0.05	5568		1878.77
77	TALKS	768	0.06	6655		1872.10
78	INDIA	638	0.05	4295		1824.75
79	CENTRIFUGES	221	0.02	14		1802.48
80	BEIJING	335	0.02	523		1758.72
81	THAT	19421	1.44	1052259	1.06	1697.01
82	QAEDA	195	0.01	0		1683.73
83	RUSSIAN	660	0.05	5362		1679.62
84	DAIICHI	197	0.01	2		1678.67
85	NONPROLIFERATION	194	0.01	0		1675.09
86	ADMINISTRATION'S	259	0.02	179		1648.65
87	CENTER	315	0.02	503		1643.01
88	ANTI	296	0.02	378		1641.62
89	COM	274	0.02	281		1604.11
90	ENRICHED	286	0.02	352		1601.32
91	LEADERS	718	0.05	7201		1577.10
92	IRANIANS	255	0.02	209		1568.75
93	BARACK	180	0.01	0		1554.21
94	ISRAELI	406	0.03	1569		1541.09
95	DIPLOMACY	307	0.02	559		1539.70
96	KAN	195	0.01	24		1532.98
97	NATO	382	0.03	1305		1528.60
98	KIM	375	0.03	1249		1516.38
99	NON	372	0.03	1241		1503.00
100	PAKISTAN'S	242	0.02	190		1502.00

Table 4 Resolutions corpus: 100 strongest keywords

N	Key word	Freq.	%	RC. Freq.	RC. %	Keyness
1	IRAN	340	1.02	345	0.05	1136.72
2	NUCLEAR	292	0.88	308	0.05	961.22
3	IAEA	192	0.58	208	0.03	624.85
4	OR	527	1.59	3041	0.47	497.94
5	PROGRAMME	90	0.27	220	0.03	191.11
6	DPRK	59	0.18	74	0.01	180.35
7	RESOLUTION	444	1.34	4138	0.64	177.75
8	ITEMS	60	0.18	84	0.01	174.46
9	GOV	48	0.14	49		159.74
10	GOVERNORS	46	0.14	46		154.31
11	RESEARCH	47	0.14	54		149.15
12	ENERGY	48	0.14	59		148.01
13	TECHNOLOGY	44	0.13	47		143.84
14	NPT	41	0.12	41		137.53
15	MISSILE	44	0.13	54		135.76
16	WEAPONS	83	0.25	302	0.05	129.29
17	COMMITTEE	223	0.67	1744	0.27	129.27
18	TREATY	47	0.14	76	0.01	127.28
19	STATES	261	0.79	2256	0.35	123.67
20	NON-PROLIFERATION	42	0.13	60		120.94
21	IRANIAN	36	0.11	36		120.75
22	PROLIFERATION	49	0.15	97	0.02	118.74
23	BOARD	55	0.17	135	0.02	116.42
24	MATERIALS	37	0.11	54		105.45
25	INDUSTRIES	39	0.12	65	0.01	103.96
26	COMPANY	32	0.10	37		101.27
27	WEAPON	29	0.09	30		96.00
28	TEHRAN	28	0.08	28		93.91
29	PANEL	66	0.20	265	0.04	93.74
30	THAT	454	1.37	5334	0.83	91.46
31	BALLISTIC	30	0.09	38		91.28
32	OWNED	38	0.11	81	0.01	88.08
33	DIRECTOR	30	0.09	42		87.21
34	CONTROLLED	36	0.11	75	0.01	84.62
35	ENRICHMENT-RELATED	25	0.08	25		83.85
36	DELIVERY	52	0.16	184	0.03	83.01
37	EXCLUSIVELY	29	0.09	42		82.95
38	ACTIVITIES	104	0.31	687	0.11	80.32
39	SENSITIVE	27	0.08	36		80.28
40	IS	130	0.39	1005	0.16	76.88
41	SAFEGUARDS	27	0.08	40		76.39
42	REPROCESSING	22	0.07	22		73.79
43	GOODS	28	0.08	48		73.53
44	FUEL	26	0.08	39		73.11
45	THEIR	223	0.67	2250	0.35	72.45
46	INDUSTRIAL	21	0.06	21		70.43
47	SUCH	128	0.39	1037	0.16	69.18
48	SYSTEMS	32	0.10	77	0.01	68.63

49	SPECIFIED	33	0.10	87	0.01	66.46
50	PEACEFUL	49	0.15	219	0.03	62.40
51	SALE	27	0.08	58		62.28
52	EXPORT	29	0.09	71	0.01	61.47
53	CHINA	21	0.06	29		61.43
54	REQUIREMENTS	35	0.11	112	0.02	60.83
55	SUPPLY	33	0.10	99	0.02	60.38
56	AIO	18	0.05	18		60.37
57	SUSPENSION	19	0.06	22		60.09
58	TERRITORIES	37	0.11	129	0.02	59.82
59	LOCATION	25	0.08	52		58.81
60	BEHALF	32	0.10	96	0.01	58.55
61	BIOLOGICAL	20	0.06	28		58.13
62	AEOI	17	0.05	17		57.01
63	CHEMICAL	25	0.08	59		54.31
64	KAA	16	0.05	16		53.66
65	NATIONALS	33	0.10	117	0.02	52.57
66	TRANSFER	37	0.11	152	0.02	51.37
67	NEGOTIATED	17	0.05	22		51.23
68	CONSTRUCTION	18	0.05	27		50.61
69	IRGC	15	0.05	15		50.31
70	SHAHID	15	0.05	15		50.31
71	OBLIGATIONS	53	0.16	309	0.05	49.03
72	CONFIDENCE	24	0.07	62		49.03
73	MASS	18	0.05	29		48.83
74	RUSSIAN	21	0.06	45		48.51
75	URANIUM	14	0.04	13		48.27
76	GERMANY	17	0.05	25		48.26
77	FRANCE	19	0.06	35		47.97
78	ENRICHMENT	13	0.04	11		46.34
79	PURPOSES	33	0.10	135	0.02	46.00
80	BOX	14	0.04	15		45.70
81	INVOLVED	37	0.11	172	0.03	45.14
82	DESIGNATED	34	0.10	147	0.02	44.82
83	VIGILANCE	15	0.05	20		44.59
84	SUSPEND	14	0.04	16		44.51
85	VERIFIED	14	0.04	16		44.51
86	TEST	13	0.04	13		43.60
87	SHALL	122	0.37	1189	0.19	43.39
88	EXPERTS	66	0.20	482	0.08	43.20
89	FINANCIAL	52	0.16	330	0.05	42.64
90	ATOMIC	15	0.05	23		41.72
91	REQUIRED	33	0.10	149	0.02	41.56
92	AGENCY	16	0.05	28		41.55
93	KINGDOM	17	0.05	34		40.94
94	NOT	72	0.22	569	0.09	40.80
95	WOULD	32	0.10	143	0.02	40.74
96	INFCIRC	12	0.04	12		40.24
97	DIRECTLY	24	0.07	82	0.01	39.48
98	RELATED	49	0.15	320	0.05	38.48
99	PROCUREMENT	14	0.04	22		38.46
100	OUTSTANDING	24	0.07	85	0.01	38.27